



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,611	11/18/2003	Toshiyasu Matsuyama	2003-1632A	4152
513	7590	05/17/2005	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			KO, TONY	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			2878	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

As

**Office Action Summary**

Application No.

10/714,611

Applicant(s)

MATSUYAMA ET AL.

Examiner

Tony Ko

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "111" has been used to designate both light-projecting surface and light-receiving surface. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sick (U.S. Patent 4,310,756).

3. Regarding claim 1, Sick discloses (Figs. 1 – 3) a sensor comprising: one or more light-projecting components (0-9) irradiating light from one or more light-projecting surfaces; and one or more light receiving components (18) receiving at least a portion of the light irradiated from at least one of the light-projecting component or components, the received light being incident on one or more light-receiving surfaces after having been reflected; the sensor detecting one or more objects in one or more overlapping zones at which at least one projected light optical path of the light irradiated by at least one of the light projecting component or components at least partially overlaps at least one received light optical path of the light incident on at least one of the light receiving component or components; the sensor further comprising: one or more optical path varying means (25) varying at least one of the projected light optical path or paths and/or at least one of the received light optical path or paths so as to physically vary at least one of the overlapping zone or zones (Col. 4, Lines 58-69); at least one of the optical path varying means carrying out adjustment of optical sensitivity by increasing at least one of the overlapping zone or zones when carrying out detection with respect to

at least one distant zone and/or decreasing at least one extent of at least one of the overlapping zone or zones when carry out detection with respect to at least one proximate zone (Figure 2 shows that the optical path varying means 25 adjusting (eliminated) part of the overlapping area).

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ross (U.S. Patent 4,652,205).

5. Regarding claim 1, Ross discloses (Fig. 3) a sensor comprising: one or more light-projecting (33) components irradiating light from one or more light-projecting surfaces; and one or more light-receiving components (35) receiving at least a portion of the light irradiated from at least one of the light-projecting component or components, the received light being incident on one or more light-receiving surfaces after having been reflected; the sensor detecting one or more objects in one or more overlapping zones at which at least one projected light optical path of the light irradiated by at least one of the light projecting component or components at least partially overlaps at least one received light optical path of the light incident on at least one of the light receiving component or components; the sensor further comprising: one or more optical path varying means (the signal generator of 319) varying at least one of the projected light optical path or paths and/or at least one of the received light optical path or paths (Col. 4, Lines 17-20) so as to physically vary at least one of the overlapping zone or zones; at least one of the optical path varying means carrying out adjustment of optical sensitivity by increasing at least one of the overlapping zone or zones when carrying out detection with respect to at least one distant zone and/or decreasing at least one extent of at least

Art Unit: 2878

one of the overlapping zone or zones when carry out detection with respect to at least one proximate zone (Fig. 3A shows how the light can be attenuated, thus alter the overlapping area of the to establish desired reflectivity).

***Allowable Subject Matter***

6. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Prior art discloses the invention set forth above. Prior art does not disclose the optical path varying means is a translucent curved body wherein the translucent body comprises flat components and curved components. Prior art does not disclose the optical varying means is a prismatic body with gradually increasing angle  $r$  angels as one goes from at least one side thereof to at least one other side thereof; prior art does not disclose the optical path varying means consist of mirror bodies comprises one or more flat components and one or more curved components formed in a continuous fashion. Prior art does not disclose the optical path varying means is such that one or more rotatable shafts.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926.

The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TKO

  
DAVID PORTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800